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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,308	01/10/2006	Guofu Zhou	USQ30232	9867
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EXAMINER				
SITTA, GRANT				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,308

Applicant(s)

ZHOU, GUOFU

Examiner

GRANT D. SITTA

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 1/10/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Zehner et al (2003/0137521) hereafter Zehner.

3. In regards to claim 1, Zehner teaches a method for updating an image on a bi-stable display by driving at least a portion of the display from a current optical state to a final optical state [0177], the method comprising: driving the at least a portion of the display from the current optical state to a reference optical state(fig. 11A driving from 1104 "3" to 1108 "6"); wherein the reference optical state is selected based on the current optical state (fig. 11a 0 and 7); and driving the at least a portion of the display from the reference optical state to the final optical state (fig. 11a 1106 and 1108).

4. In regards to claim 16, Zehner teaches program storage device tangibly embodying a program of instructions executable by a machine to perform (fig. 1 (12)) a method for updating an image on a bi-stable display by driving at least a portion of the display from a current optical state to a final optical state (fig. 11a 1106 and 1108), the method comprising: driving the at least a portion of the display from the current optical

state to a reference optical state (fig. 11a 1106 and 1108); wherein the reference optical state is selected based on the current optical state (fig. 11a 1106 and 1108); and driving the at least a portion of the display from the reference optical state to the final optical state [0177-0185, 0195 and 197].

5. In regards to claim 17, Zehner teaches an electronic reading device, comprising: a bi-stable display (310, 400) (abstract); and a control (100) for updating an image on the bi-stable display by driving at least a portion of the display from a current optical state to a final optical state (fig. 11a 1106 and 1108), the control comprising: means for driving the at least a portion of the display from the current optical state to a reference optical state (fig. 1 10); wherein the reference optical state is selected based on the current optical state (fig. 11a 1106 and 1108); and means for driving the at least a portion of the display from the reference optical state to the final optical state [0177-0185, 0195 and 197].

6. In regards to claim 18, Zehner teaches a method for updating an image on a bi-stable display (abstract) by driving at least a portion of the display from a current optical state to a final (fig. 11a 1106 and 1108), extreme optical state (fig. 11B 1122 and 1124), the method comprising: for transitions wherein the current optical state and the final, extreme optical state differ (fig. 11B 1122 and 1124 white and black), driving the at least a portion of the display from the current optical state to the final, extreme optical state comprises applying an extreme driving pulse (ED) with a duration that is proportional to a distance that particles in the bi-stable display must move to transition from the current optical state to the final, extreme optical state [0177-0185, 0195 and 197]; and for

transitions wherein the current optical state and the final, extreme optical state are the same, leaving the at least a portion of the display unaddressed (fig. 8 308 N).

7. In regards to claim 2, Zehner teaches wherein: the bi-stable display comprises an electrophoretic display (abstract).

8. In regards to claim 3, Zehner teaches wherein the reference optical state is selected as an extreme optical state that is furthest from the current optical state (fig. 11a level "3" and 1106 with "7" being further than "0").

9. In regards to claim 4, Zehner teaches wherein: the current optical state, reference optical state, and final optical state are greyscale optical states [0177].

10. In regards to claim 5, Zehner teaches wherein: the reference optical state is selected as the white state when the current optical state is between full black and middle grey; and the reference optical state is selected as the black state when the current optical state is between full white and middle grey (fig. 11a 1106 and 1108 and 1112 and 1114).

11. In regards to claim 6, Zehner teaches wherein: at least one of the current optical state, reference optical state, and final optical state is a color optical state [0177-0185, 0195 and 197] (Examiner notes black and white are colors).

12. In regard to claim 7, Zehner teaches the method of claim 1, wherein: the reference optical state is selected independently of the final optical state (fig. 11a 1106 and 1108 and 1112 and 1114).

13. In regards to claim 8, Zehner teaches wherein: the reference optical state is selected as a middle point for image transitions towards an extreme black state as the final optical state when the current optical state is between full black and middle grey; and the reference optical state is selected as the middle point for image transitions towards an extreme white state as the final optical state when the current optical state is between full white and middle grey (fig. 11a 1102 and 1104 and 1110). Examiner notes reference states is the states it pass through to go to the next state within the similar grayscale.

14. In regards to claim 9, Zehner teaches wherein: the driving of the at least a portion of the display from the current optical state to the reference optical state comprises applying a reset pulse (fig. 11 a 1106 reset it to 7 before applying pulse) to the at least a portion of the display; and the driving of the at least a portion of the display from the reference optical state to the final optical state comprises applying, to the at least a portion of the display, an extreme driving pulse following the reset pulse and of opposite polarity [0178-0186]. Examiner notes Zehner discloses dividing the display into two groups.

15. In regards to claim 10, Zehner teaches the current optical state to the final optical state comprises applying at least one pre-set pulse to the at least a portion of the display prior to and/or after the reset pulse (fig. 9 first of 304)

16. In regards to claim 11, Zehner teaches wherein: the applying at least one pre-set pulse comprises applying a single pre-set pulse having a polarity opposite to that of the reset pulse (fig. 9 first of 304). Examiner notes the polarities switch.

17. In regards to claim 12, Zehner teaches wherein: the reset pulse comprises an over-reset pulse (fig. 9 [0169] 5 of the reset pulses in 304').

18. In regards to claim 13, Zehner teaches wherein: when the current optical state and the final optical state are on the same end of a spectrum (fig. 11b "0" and "1"), the driving of the at least a portion of the display from the current optical state to the final optical state comprises applying a reset pulse (RN) (fig. 11b 1122) to the at least a portion ([0175]) of the display followed by an extreme drive pulse (ED) of opposite polarity (fig. 11b 1124) at least until the final optical state is reached (fig. 11b level "1"); and when the current optical state and the final optical state are on different ends of the spectrum (fig. 11a 1106 and 1108), the driving of the at least a portion of the display from the current optical state to the final optical state comprises applying a reset pulse (RN) to the at least a portion of the display at least until the final optical state is reached (1106).

19. In regards to claim 14, Zehner teaches wherein: the driving of the at least a portion of the display from the current optical state to the final optical state comprises applying at least one pre-set pulse to the at least a portion of the display prior to and/or after the reset pulse (RN) (fig. 9 examiner is considering first half one of the six reset pulses as a preset pulse.)

20. In regards to claim 15, Zehner teaches wherein: the applying at least one pre-set pulse comprises applying a single pre-set pulse having a polarity opposite to that of the extreme driving pulse (fig. 9 [0169] 5 of the reset pulses in 304').

21. In regards to claim 19, Zehner teaches further comprising: applying at least one pre-set pulse to the at least a portion of the display prior to and/or after the extreme driving pulse (fig. 9 examiner is considering first half one of the six reset pulses as a preset pulse.).

22. In regards to claim 20, Zehner teaches wherein: the applying at least one pre-set pulse comprises applying a single pre-set pulse having a polarity opposite to that of the extreme driving pulse. (fig. 9 examiner is considering first half one of the six reset pulses as a preset pulse.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GRANT D. SITTA whose telephone number is (571)270-1542. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629

/Grant D Sitta/
Examiner, Art Unit 2629
February 26, 2009